

**Application No.: 10/582,468**  
**Filing Date: March 23, 2007**

## **REMARKS**

In response to the Final Office Action mailed November 19, 2010, Applicant respectfully requests the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. Accordingly, Claims 1, 3-10, 14-16, and 18-20 are currently pending in the present Application.

### **Election/Restrictions**

Claims 11-13 and 17, which were previously withdrawn, have been canceled without prejudice.

### **Prior Art Rejections**

Claims 1, 3-6, 9-10 and 14-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Blanquaert (4,261,063). Claims 7-8, 16, and 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blanquaert in view of Sachdeva (5,697,779).

Applicant respectfully disagrees with the rejection of the pending claims. Nevertheless, to advance prosecution, Applicant has amended independent Claims 1 and 19 as described below. Applicant reserves the right to pursue the rejected claims in the previous or similar form in a continuing application. As amended, Claims 1 and 19 both a dental implant that is “sized and configured to fit at least partially in a hole formed in jaw bone and through soft tissue belonging to the jaw bone.”

As will be explained in detail below, the rejection of Claims 1, 3-6, 9-10 and 14-15 is improper because Blanquaert does not disclose a dental implant as *positively* recited in independent Claim 1. In addition, as has been argued previously, Blanquaert is also silent regarding the amount of anatase provided. Accordingly, Applicant respectfully requests that the rejection of the pending claims be withdrawn and that these claims be indicated as allowable.

In addition, with respect to independent Claims 1 and 19, as will be explained below, it would not be obvious to replace the scaly structure of Blanquaert with threads.

Blanquaert is directed to a large titanium alloy pin for use with long bones, such as the femur, the tibia, the fibula, or the humerus, and in particular, for prosthesis of the knee or hip. See Blanquaert, Abstract and col. 3, lines 2-7. However, Blanquaert does not disclose a dental implant as recited in amended Claim 1 or threads on a lower portion of the implant. In response to Applicant’s previous arguments that Blanquaert does not disclose a dental implant, the Final

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Office Action at paragraphs 6 and 7 stated that the pending claims did not positively recite that the claimed device was a dental implant. Accordingly, Applicant has amended Claim 1 as outlined above to positively claim a dental implant. For at least this reason, Applicant submits that Blanquaert cannot anticipate Claim 1 and that Claims 1, 3-6, 9-10 and 14-15 cannot be anticipated by Blanquaert.

In addition as was argued in the previous response, Blanquaert does not disclose a layer comprising 70-100% anatase. The Final Office Action continues to assume that the mere mention of “anatase” in Blanquaert meets the claimed limitation. Because anatase often exists as a transition between the amorphous phase of titanium oxide and the rutile phase of titanium oxide, it is difficult to obtain layers of “70-100% anatase”. Accordingly, “anatase” in the art can often simply refer to a layer with anatase as one component. Accordingly, Applicant respectfully submits that it is improper to assume that Blanquaert inherently discloses a layer of 70-100% anatase.

Claims 1 and 19 also recite that the dental implant includes threads. The Final Office Action states that it would be obvious to replace the scaly structure of Blanquaert with the threads of Sachdeva. Applicant respectfully disagrees. As noted above, Blanquaert is directed to a large titanium alloy pin for use with long bones, such as the femur, the tibia, the fibula, or the humerus, and in particular, for prosthesis of the knee or hip. Notably, the **upper portion of the implant is curved**. If the lower portion of the Blanquaert implant was modified to include threads as suggested by the Final Office Action, the upper curved portion would disadvantageously bore out a large opening as the implant was rotated into the place. That is, one of ordinary skill in the art would not add threads to the Blanquaert implant because it is **asymmetrical**. For at least this reason, Applicant submits that the combination of Blanquaert with Sachdeva is improper and that the pending claims are in condition for allowance.

Applicant also submits that it would not be obvious to modify Blanquarert to meet the “dental component” limitation of Claim 1. Forming an oxide coating through anodic oxidation creates heat. Temperatures that exceed 400°C can adversely affect the strength of a titanium substrate. Accordingly, one of skill in the art would not interpret Blanquaert’s disclosure as applying to a small component, that will be exposed to high loading and pressure, such as a dental component.

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Specifically, while oxide coatings have been used in prior art dental implants, making the oxide coating 70-100% anatase require a significant amount of extra work (e.g., to maintain the dental implant at appropriate temperatures during the anodizing process) and greater expense for no apparent reason. To make the oxide coating 70-100% anatase, the temperature must be precisely controlled or the coating will move to the rutile phase. However, there is no recognition in the art that prior art oxide coatings could be improved by using the anatase phase. Accordingly, there is no motivation for one of skill in the art to engage in the expensive and complicated process of maintaining the dental implant at appropriate temperatures during the anodizing process in order to form a layer of 70-100% anatase. One of skill in the art would not have been expected to confer any particular desirable property to that anatase coating over prior art oxide coatings. Rather one of skill in the art would have expected an anatase coating to act in a similar manner and thus would have no motivation to go through the extra work and expense in order to form the coating of 70-100% anatase.

**No Disclaimers or Disavowals**

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present Application.

**CONCLUSION**

Applicant respectfully submits that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicant respectfully requests that the Examiner indicate that Claims 1, 3-10, 14-16, and 18-20

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are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicant respectfully submits that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments are made only to expedite prosecution of the present Application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicant also has not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted above, and Applicant reserves the right to later contest whether a proper reason exists to combine these references and to submit indicia of non-obviousness.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: \_\_\_\_\_ 1-24-2011

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